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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/516,474	11/30/2004	Charles Loboz	041-544-L	2848

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UNISYS CORPORATION
UNISYS WAY
MAILSTOP E8-114
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EXAMINER

PRIETO, BEATRIZ

ART UNIT	PAPER NUMBER
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2142

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	12/19/2006	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/516,474

Applicant(s)

LOBOZ ET AL.

Examiner

Prieto B.

Art Unit

2142

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This communication is in response to Amendment filed under 37 CFR §1.111 to a non-final office action; claims 3, 5 and 6 have been amended, claims 1-3, and 5-9 remain pending.

It is noted that although status identifier of claim 4 has an "original" status identifier, claim 4 was canceled via a preliminary amendment filed 11/30/04.

2. Quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action may be found in previous office action.

3. Claims 1-3, 5-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Joffe et. al. (US 6,185,619) in view of Attanasio et. al. (US 5,918,017) in further view of Evans, et. al. in A communication-Ordered Task Graph Allocation Algorithm, UUCS-92-026, April 1992, p. 1-25.

Regarding claims 1-3 and 5-9, Joffe et. al. teaches substantial features of the invention as claimed including a computing system comprising

a client (25 of Fig. 1C column 5, lines 1-5, 3-67) and a plurality of servers (column 5, lines 10-32, plurality of servers see column 9, lines 26-39) for serving client request (see column 6, lines 46-66), further including

assigning (scheduling) request transactions within a computing system (see column 3, lines 44-63), including receiving a client transaction request from a client (25 of Fig. 1C) (column 11, lines 27-29); determining the number of currently open TCP connections and the server processor idle time (column 12, lines 17-23, column 30-37, 55-61) and forwarding the transaction request to the best server available among a plurality of server based on best metric value;

however although Joffe et. al. suggest directing the transaction request to the most idle server process, it does not explicitly teach forwarding transaction request to server process having currently opened connection, i.e. connection that have not time out since the last finished execution of a previous transaction (column 5, lines 14-35). Attanasio's et. al. teachings for

Art Unit: 2142

forwarding transaction request to server process having currently opened connection, i.e. connection that have not time out since the last finished execution of a previous transaction (Attanasio: column 5, lines 2-13, column 10, lines 25-50).

It would have been obvious to one ordinary skilled in the art at the time the invention was made given Joffe's et. al. suggestion of considering still opened connections that have recently finished execution of a previous transaction and therefore have not timeout and closed after the last finished execution as the best server to which transactions request should be forward, to consider Attanasio's et. al. teachings for forwarding transaction request to server process having currently opened connection, i.e. connection that have not time out since the last finished execution of a previous transaction. Motivation would be to maintain in a gateway transaction processing software the status of server processes include a connection table of the most recently finishes execution of the previous transaction in a dynamic connection table maintaining the status of the server processes.

Joffe et. al. further teaches a gateway (column 9, lines 27-39) for receiving and allocating transactions request from clients (column 9, lines 40-59) via a director routing policy (column 11, line 65 to column 11, line 14); storing the most recent finish time, i.e. non-timed out connections and the status of a server process (Joffe: column 11, lines 66-column 112, line 23, Attanasio: column 5, lines 2-13, column 10, lines 25-50); method is a software implementation (see Joffe: column 4, lines 49-67), server process interacts with a processor executing the software implementation of the method (see Joffe et. al., column 4, lines 49-67). However, neither Joffe nor Attanasio teach using the most recently idle processor.

Evans discloses as prior art a list scheduling algorithm that creates a priority queue of task to be performed and queue of idled processors arranged such that the stack queue causes the most recently idled processor to be the processor selected for allocation (p. 9). One would be motivated to applied these teachings to the above-mentioned system because in doing so the selected task (transaction request for executing that task) is the one which gives the maximum saving in the communication time for the chosen processor which recently idled, as discussed by Evans, et. al.

Response to Arguments

4. Regarding claims 1-3, 5-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Joffe et. al. in view of Attanasio et. al. in further view of Evans, et. al., it is argued (p. 9 of remarks) that at least independent claims 1, 7, 8 and 9 describe a method and system which comprises three main steps, labeled, steps 1, 2 and three.

In response to above-mentioned assertion, it is respectfully noted that claims 7, 8 and 9 sets forth a system comprising: a transaction request means, determination means and forwarding means. It is noted that this claim limitation contains a recitation of the intended use of the claimed invention, namely, "arranged to", this intended use does not limit this claim limitation because the claim language recited the intended use of receiving, determine and forward, thus does not further limit the claim scope to a particular structure and/or does not result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art, as required. If the prior art structure is capable of performing the intended use, then it meets the claim (see MPEP §2106 I(C)) and 2111.04).

Claim 7 does not recite a series of steps performed sequentially. Further, The transitional term "comprising", which is synonymous with "including," "containing," or "characterized by," is inclusive or open-ended and does not exclude additional, unrecited elements or method steps. See, e.g., Mars Inc. v. H.J. Heinz Co., 377 F.3d 1369, 1376, 71 USPQ2d 1837, 1843 (Fed. Cir. 2004) ("like the term comprising,' the terms containing' and mixture' are open-ended."). Invitrogen Corp. v. Biocrest Mfg., L.P., 327 F.3d 1364, 1368, 66 USPQ2d 1631, 1634 (Fed. Cir. 2003) (see MPEP §2111.02). Thus, Claim 7 does not recite a series of steps performed sequentially.

Furthermore, it is respectfully noted that claim 1 sets forth a method comprising the steps of: receiving, determining and forwarding. It is noted that this claim limitation comprises a series of steps does not exclude additional, unrecited elements or method steps, nor does are the steps required to be performed sequentially, e.g. one after another.

5. Regarding claims 1-3, 5-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Joffe et. al. in view of Attanasio et. al. in further view of Evans, et. al., it is argued (p. 11-12 of remarks) because [AS BEST UNDERSTOOD] although Evans teaches causing the most recently idled processor to be the processor selected for allocation, according to Applicant “the decision to select the most recently idle processor is not based on an understanding that the processing time may be saved by possible removing the need to flush and/or override a memory cache, but rather, the central impetus of the Ravi Algorithm is to select a task appropriate for the selected processor.”

In response to the above-mentioned argument, Applicant’s interpretation of the applied reference is noted. However, at least claim 1 recited, a method comprising the steps of: receiving a transaction request from a client; determining the idle server process that most recently finished execution of a previous transaction, and forwarding the transaction request to the most recently idle process. It is noted that the features upon which applicant relies (i.e., “*the decision to select the most recently idle processor is not based on an understanding that the processing time may be saved by possible removing the need to flush and/or override a memory cache*”) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

In response that Evans does not suggest the desirability for choosing the most recently idled processor, it is respectfully noted that, Evans discloses that (i) the desire to keep as many processors busy as possible and to reduce communication cost must be traded against path length priorities (p. 15); (ii) in operation, tasks are inserted into an eligible task set when their precedents are met and the processors become eligible for allocation when idle (p. 6); PSET is a stack queue causing the *most recently idled processor to be the processor selected for allocation*. The heuristics select the task from a range of high priority tasks. The task selected is the one, which gives the maximum savings in communication time *for the chosen processor* (p. 9).

Applicant’s arguments that there is no motivation in the reference for selecting the most recently idled processor, have been fully considered but not found persuasive.

6. All applicant’s argument filed with the above-mentioned amendment have been fully considered but not found persuasive.

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Reply to a final rejection or action must include cancellation of, or appeal from the rejection of, each rejected claim. If any claim stands allowed, the reply to a final rejection or action must comply with any requirements or objections as to form (see 1.113). If prosecution in an application is closed, an applicant may request continued examination of the application by filing a submission and the fee set forth in § 1.17(e) prior to the earliest of: (c) A submission as used in this section includes, but is not limited to, an information disclosure statement, an amendment to the written description, claims, or drawings, new arguments, or new evidence in support of patentability. If reply to an Office action under 35 USC 132 is outstanding, the submission must meet the reply requirements of § 1.111 (see MPEP 706.07).

9. An amendment filed after final rejection is not entered as a matter of right and must be filed in compliance with 37 CFR 1.116 or 1.312, respectively (see MPEP 201). An amendment that will place the application either in condition for allowance or in better form for appeal may be admitted. Amendments complying with objections or requirements as to form are to be permitted after final action in accordance with 37 CFR 1.116(a) (see MPEP 706.07(e)) may also be admitted. Except where an amendment merely cancels claims, adopts examiner suggestions, removes issues for appeal, or in some other way requires only a cursory review by the examiner, compliance with the requirement of a showing under 37 CFR 1.116(c) is expected in all

Art Unit: 2142

amendments after final rejection (see MPEP 714.13). An amendment filed at any time after final rejection, but before an appeal brief is filed, may be entered upon or after filing of an appeal brief provided the total effect of the amendment is to (A) remove issues for appeal, and/or (B) adopt examiner suggestions (MPEP 714.13 see also MPEP § 1207 and § 1211).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Prieto, B. whose telephone number is (571) 272-3902. The Examiner can normally be reached on Monday-Friday from 6:00 to 3:30 p.m. If attempts to reach the examiner by telephone are unsuccessful, the Examiner's Supervisor, Andrew T. Caldwell can be reached at (571) 272-3868. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3800/4700.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system, status information for published application may be obtained from either Private or Public PAIR, for unpublished application Private PAIR only (see <http://pair-direct.uspto.gov> or the Electronic Business Center at 866-217-9197 (toll-free).

Any response to this action should be mailed to:
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